Problems with Information Systems Installed Under MCA Projects

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Overview:

- Various problems associated with information systems installed under MCA projects have been discussed at previous JSC meetings
- No statistical data was available for the JSC to quantify these problems
- NETCOM/9th ASC was tasked at the Summer 03 JSC meeting to gather data from the field, in an attempt to define the nature and extent of the problem, and brief the results at this meeting

Action:

- **NETCOM/9th ASC, in coordination with HQ, USACE, tasker the Regional and Functional Chief Information Officers (CIOs) to provide data on the problems associated with IS installed under MCA projects in their AORs**
- **Requested data included:**
  - **Location**
  - **MCA Project Number**
  - **Brief description of the problem(s) and the action(s) required to resolve them**
  - **Delay incurred due to the problem(s), if any**
  - **Cost to the Government to resolve the problem(s), if any**

Response:

- **Received data from only 2 of the 4 CONUS RCIOs, which covers:**
  - **9 installations**
  - **16 MCA projects ***
- **No data was received from the OCONUS RCIOs and functional CIOs**

* **NOTE: The total number of MCA projects at those installations was not identified**

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Northeast Region					
Fort Eustis & Fort Story	All	**Improper standards being used to design** infostructure leading to Sub standard Information Systems Infostructure installation.	**Mandatory** requirements for the COE and installation DPW **to use the I3A guide** for communications requirements.	N/A	N/A
Fort Eustis & Fort Story	All	Lack of coordination between the COE, DPW and the DOIM during construction leading to **Sub standard Information Systems Infostructure installation.**	Mandatory requirements for the COE and installation DPW to coordinate with the DOIM.	N/A	N/A
Fort Eustis & Fort Story	All	Lack of coordination between the COE, DPW and the DOIM during construction leading to Sub standard Information Systems Infostructure installation	Provide MCA funding to the DOIM communications QA		
Fort Eustis & Fort Story	All	**Unqualified contractors** installing Sub standard Information Systems Infostructure.	**DOIM** should be the COR with the responsibilities to **sign the DD250** for MCA communications contract work.	N/A	N/A
Fort Eustis & Fort Story	All	Using **improper materials** leading to Sub standard Information Systems Infostructure installation.	Mandatory requirements for the **COE** and installation DPW to **provide the DOIM with not only drawings but communications specifications** as well.	N/A	N/A
TYAD	44830	**No test specs/documentation** on wiring/fiber optic cable.	**Cables had to be retested** and replaced in some instances.	None	Costs were incorporated into equipment installation and setup.
TYAD	BCA 47790	Improper wiring/installation of LAN/TELCO connections, **improper mounting of LAN/telephone support equipment,** deviation from final design review and no test specs/documentation on wiring/fiber optic cable.	Wiring had to be properly installed and connections and LAN drops added. Support equipment racks and support equipment had to be relocated. Cables and terminations had to be retraced and labled properly.	None	Costs were incorporated into equipment installation and setup.
TYAD	BCA 51853	Improper wiring/installation of LAN/TELCO connections, improper mounting of LAN/telephone support equipment, deviation from final design review and no test specs/documentation on wiring/fiber optic cable.	Wiring had to be properly installed and connections and LAN drops added. Support equipment racks and support equipment had to be relocated. Cables and terminations had to be retraced and labled properly.	None	Costs were incorporated into equipment installation and setup.

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Fort Monmouth	DAAB07-97-D-L015 I3MP	Contractor initiated a "Post Award" verification site survey, which resulted in approx $10K in contractor add-ons to this I3MP project.	DPW/DOIM reviewed and rejected the need for the Government to pay for these add-ons since the contractor's cost was offset by work performed by the government in other areas of the project.	6 Weeks delay to MOD contract	$10K
Fort Monmouth	DAAB07-97-D-L016 I3MP	**Contractor install Fiber-Duct rather than PVC DB60** with inner-duct as specified on the ISEC EDP Drawings.	Contractor was allowed to bill the Govt. approx $7K in add-on for plugs used to transition the Fiber Duct into MHs. In addition, the government was charged another $1.5K for plugs used to transition this Fiber Duct into Ft. Monmouth buildings.	N/A	**$8.5K**
	DACA51-98-C-0050 Two Company Satellite Fire Station	**Never received** electronic and hard **AS- BUILT Drawing set.** Cable test results submitted were not assessable from contractor Floppy Disk. Special software required and was never delivered, thereby cable test results were not issued in a readable format.	Referred issues to Corps of Engineers, issues unresolved.	N/A	
	DACA51-99-C-0043 Design/Build Addition Building 1210	Never received electronic and hard AS- BUILT Drawing set. Cable test results for backbone were never issued.	Referred issues to Corps of Engineers, issues unresolved		
	DACA51-99-C-0043 Design/Build Addition Building 1210	Overhead Mono-Systems **cable tray installed was not installed** with stiffeners **as specified** by the manufacturer and contract documents. Contractor refused to install cable tray stiffeners to prevent horizontal tray deflection. The field condition was issued	At first The Corps of Engineers did not believe the tray installation was a issue until a manufacturer representative issued an independent report indicating the same discrepancy as the Telecom Designer's report. The Directortae of Public Works refused C/	30 days	Approximtely **$20K in additional customer funds** were issued to the cable contractor to work overtime in order install cable plant at their facaility.

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Fort Monmouth New Jersey	DACA51-02-C-0021 Revitalize Barracks,Bldg 1204& 1205	Current Construction project has underwent **architectural changes** which **generated a design change for telecom pathway**. The change replaced wire trough with cable tray. Since unit costs were not established as part of the contract documents negotiations fo	Establish across the board unit prices for major construction items for each discipline for changes that may occur during the life of the construction project.	**(7) month delay** in processing this construction change.	Approximately $60K credit to the construction project obsorbed by other disclipline cost over-runs.
All	All	Corps of Engineers for MCA projects and PMDCASS for I3MP projects must be educated in telecom construction. While they may have experence with other building construction , they lack certification and experince in the telecom field yet have the contol on	Corps of Engineers for MCA projects and PMDASS for I3MP projects must be educated in telecom construction to understand how to approach field changes caused by design changes or field conditions. By doing so telecom changes will be quickly negotiated avoi	Average I3MP processing delay for each change approximately (3) months.	Project delay pushes out completion date. Contractor may bill for idle time.
Natick Garrison		**Contractors** who are doing renovations repeatedly **cut out the Network LAN cables** prior to telling us. Information Management Directorate doesn't have a chance to disconnect them from the wiring closet and have to trace	Better coordination is required between the Public Works Directorate, Contractors and IMD.		
Natick Garrison		**Information Management Directorate (IMD) is not consulted for Network access prior to construction.** This complicates matters after the fact when the people move in and there is no network access available. This immediately becomes a critical issue for I	Same as above.		
APG	All	Too little standarization in determining what will be included in the construction contract, and what will not? On some projects, the COE contractor installs all inside and outside wiring. On some projects, the DOIM installs everything. On some project	Standardize communications installations responsibilities.		
APG	All	There are **no line items in the ISCE software for estimating the costs for removing/relocating existing**	Add removal/relocation line items to the ISCE software.		

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APG	All	Substandard or **improper installation of** communications facilities, especially **Outside Plant fiber and copper cable**.	Require contractor to provide documentation to DOIM about contractor personnel qualifications. Require that inside and outside plant test reports beconducted and that copies of all test results be provided to the DOIM. Provide funds to the DOIM for coor		
APG	MCA 287	Cannot determine who wrote the ISCE. Received MIPR for communications installation, but no one in the DOIM, COE, DPW or customer organization seems to know what comm is required. Cannot determine from the ISCE where the designer planned to pick up cable	First step: DOIM POC is meeting with customer to determine requirements. DOIM POC will ask COE/DPW for a set of electical drawings.		Cost cannot be quantified at this time, but the customer may have to fund part of inside and outside comm. Installation. If MCA funds provided are insufficient. May have to coordinate conflicting ATS contractors.
APG	MCA 17569	No major issues yet. Customer claimed no communications were required, but the DOIM was able to over-rule this and include Safety phones at road crossings. DPW/COE conducted a Planning Charrette very early in the planning process. This was VERY benefic	Early coordination between COE, DPW, and customer has helped eliminate/avoid many problems.		
APG	MCA 35849	The **contractor who is re-writing the 1391 requested a complete revision of the Tab F (ISCE)** on very short notice. It was difficult to get legible copies of the revised site maps, so the ISCE revision could not be completed in a timely manner.	Contractors who are hired to write 1391s should not be able to task the DOIM, They are currently able to say that they have fulfilled their contractural requirements when they send a short notice "tasking" to the DOIM. The DOIM is then forced to "scramb		

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Southwest Region					
Fort Hood	19699	**Bad ST fiber terminations** (High Losses), **OTDR testing inaccurate, launch cable was too short** and instead of capturing terminations and displaying total end to end loss contractor just capture the fiber itself.	MCA contractor took no action to reterminate after being asked. Instead they put a longer launch cable on the OTDR and retested but still failed to capture the ST terminations on the overall OTDR trace resulting in an inaccurate trace of total losses.	Unknown	Unknown
Fort Hood	54459	**Copper path re-route incorrectly done causing loss of phone service to active customers.**	DOIM contracted with 8a contractor to repair copper on emergency basis.	Unknown	**$18,000.00**
Fort Hood	54459	**Bad fiber terminations**, and high loss on splices	MCA contractor repaired.		
Fort Hood	54459	Bad fiber terminations, and high loss on splices.	MCA contractor repaired.		
Fort Hood	22611	**Bad category 5e terminations.**	MCA contractor repaired.		
Fort Hood	22611	Bad fiber terminations and high losses on fiber splices.	MCA contractor repaired.	Unknown	Unknown
Fort Irwin	40964	UMMCA Project -Remote Fire Station. Supporting **Facilities copper cabling was negotiated out of the project without knowledge to the DOIM**. Many M/hr's spent in preparing re justification and additional cost estimates.	Many M/hr's spent in preparing re justification and additional cost estimates. DOIM used cable on hand and internal Outside Plant labor resources to install the cable in order to meet the BOD date required. DOIM was compensated 6 months later with cable	No delay was incurred.	$1.5K
Fort Irwin	27775	557th Maintenance Facility - MCA - Supporting **Facilities fiber and copper termination deleted out of Project**.	Coordinate with DPW and COE to have terminations put back in. This facility has a BOD of 1/16/04.	No delay was incurred.	$0
Yuma	General Comment	The **failure of the COE contractors to follow EIA/TIA guidelines.**			
Yuma	General Comment	The ignoring of communications staffinput to drawing reviews (for example, the will have several drawings showing the location of the toilets but none showing the communications layouts. When we comment, the later reviews and construction drawings still			
Yuma	General Comment	We have **never received Communications as-builts** for any MCA construction			

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Yuma	General Comment	The **interface to existing cable plant is always hazy.** Based upon our previous experiences with COE contractors, we refuse to allow them to terminate their building cables (fiber and copper) to our outside plant. The COE does not compensate us for doing th			
Fort Bliss	General Comment	Need to know at what point our **1391 gets changed.** When we submit through the local DPWL and the end result 1391 is received, it does not always reflect our original input. We did experience various issues of this type on a recent CIDC MCA project 1391 t			
Army wide		Army Reg. 415-15, table L is outdated in regards to current technology and standard communications practices. Example, Table L, item 3: Outside cable for BEQ/BOQ/troop billets/family housing is listed as **Subscriber Procured and Installed.** This means wh	Change Army Reg. 415-15 Table L. All distribution cable (inside and outside) associated with Military Construction should be part of the MCA project. Changes to 415-15 should be made with Post DOIM inputs.		
Army wide		Information Systems Cost Estimating (ISCE 3.3.1) software is outdated in regards to current technology. ISCE software is used to develop 1391, Tab F cost estimates. **Software tables contain outdate communications devices and costing.**	**Update ISCE software with current technology and cost figures. Updates should be made with Post DOIM's participation.**		

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Alaska wide		Development of 1391's. USARAK has experienced problems for years in developing comprehensive 1391's. 1391's have been developed without Post Directorate's input and then a funding figure assigned. At design we discover huge PA funding shortfalls.	**Use the Planning Charrette process to develop 1391.** Mandate Post Directorates involvement. Ensure communications, environmental, force protection, water, sewer, power and site locations issues are addressed and adequately cost estimated to ensure a comp		
Army wide		Blatant disregard towards communications requirements associated with MCA projects by many members of DPW and Corps of Engineers project management and engineering staff.	Better educate DPW and Corps of Engineers personnel. In regards to the MCA program, the term "complete and usable" also includes communications. Post DOIM's should not have to fight for inclusion of communications in MCA projects.		
Army wide		Communications as-built drawings. Corps of Engineers places little or no importance on ensuring contractors provide adequate communications as-built or red line drawings.	Develop Corps of Engineers communications check list to ensure post construction deliverables are provided by contractors and their subs.		
Army wide		Non-Appropriated Funds (NAF) construction projects. **Communications requirements for NAF projects are often left out.** When they are included, they often become the bill payer for other project shortfalls.	Elevate the importance of communications infrastructure in all military construction projects.		
Army wide		AAFES construction projects. **Communications requirements for AAFES projects are often left out.** When they are included, they often become the bill payer for other project shortfalls.	Elevate the importance of communications infrastructure in all military construction projects.		
Army wide		DPW and Corps of Engineers policy and proceedures for DD250 acceptance of completed MCA projects. In many cases, the **Post DOIM has no input on project acceptence inspections. DD250's are signed and facilities are accepted with numerous communications sh**	Establish Army wide proceedures to ensure communicaitons infrastructure issues are properly addressed on **all** MCA projects. Get back to basics, complete and usaable should mean complete and usable.		

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Army wide		The Corps of Engineers receives funding for engineering and design for MCA projects. This is to include communications engineering and design. However, the COE has no communications engineers, designers or planners on their staff All communications re	Establish Army wide policy for funding Post DOIM's to support engineering, design and planning associated with MCA program.		
Army wide		Communications Quality Assurance Inspections associated with MCA proejcts. **Local DOIM's are not adiquatly staffed to provide comprehensive QA during the construction phase of MCA projects.** This shortfall results in costly contract modifications and foll	Army/NETCOM must address this issue. Local DOIMs need project management funding to support MCA. Appropriated funding through the 1391 process would allow the DOIM community to contract QA support for surges in MCA construction.		
RIA	PR 2003-2128	MKM Engineers requested permission to run additional electrical equipment within Comm Closet.	Provided telecom standards TIA/EIA-569-1	NONE	NONE
RIA	PR 2001-1205	Building Contractor did not know how or have appropriate tools required to splice into the data/phone infrastructure as per contract.	Contractor rented appropriate device. Damage to infrastructure may yet result due to seepage into the splice case and or improper sealing of case.	NONE	6+ hours IT Contractor
Ft Leonard Wood		COE letting **unqualified personnel do the wiring for phones and LAN** and not supplying as-built drawings.	Let only certified communication installers put in wiring and make sure wiring meets most current specifications.		
Fort Riley	45230	Electrical contractor installing manholes did not have manhole drawings (butterflies) showing duct location or I3A guidelines. Duct were installed in the wrong location.	COE modfied contract to core drill manholes and relocate ducts to bottom window of manhole to meet I3A standard	5	2K
Fort Riley	51656-53374	Electrical **Contractor Core drilled and placed duct next to ceiling in manholes** and alternated sides from the left to the right between manholes to make it easier for cable to make the turns with no regard for duct integrity or future expansion.	COE didn't understand the problem. Had to be educated in underground communication construction. Duct locations had to be changed by core drilling and exhuming manholes and re-setting to get ducts in proper location.	21	3K

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Fort Riley	6424	Improper type of cable termination indoor type jacks installed for outdoor phone. Unsanitary installation.	Unresolved/ this office not notified of gov acceptance until to late to fix.	0	0
Fort Riley		Cables installed in duct system but **cables not properly racked or tagged. COE does not do final inspection in manholes**, DOIM finds a mess later	DOIM OSP tags the cables as needed when we find they have not been tagged.	0	.5K
Fort Riley	57477	Manholes specified for this project have large hinged lids instead of round frame and cover. The location for several of these is on a slope, forcing a large portion of the manhole to be exposed above grade and of course unusable. A extension ring and a r			
Fort Riley	All	Red-lined drawings or as-built drawings missing			
Ft McCoy	11065	Design was for installation Dining Facility, Corps stated no network connectivity was needed, so **no fiber was included in the design.** Installation will end up funding for the fiber to be added at a later date. Dining facilities are also used as class r	FT McCoy will have to fund for data connectivity after the fact.	0	not yet determined
Ft McCoy	unknown Omaha BRAC building NMCB-25 FY 98/99	**Omaha Corps of Engineers changed the design between the final design review and the actual contract design.** They removed all of the wiring from the conduit boxes so there was no cable pair included in the completed structure, only vacant ducts and outle	The NMCB-25 funded for a contractor to pull all internal wiring for voice & data data jacks.	120 days	$30K
Fort Carson	Several	As built construction drawings are not provided at the time of final inspection and building turnover to Directorate of Public Works (DPW). The problem is the DOIM cable locator not having current drawings showing manhole/duct cable placement for dig perm	Have the CORP establish a defined number of days to provide the DPW the drawings as soon as possible after building turnover.	According to the drawing room at DPW this could be 3 months or 3 years.	Unknown

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Fort Carson	All	**The COPR and DPW use MircoStation software** to do all construction drawings. **The DOIM uses AutoCad.** Information is lost due in the translation between software programs.	Everyone change to either MicroStation or AutoCad. This if probably not a cost effective solution.	Unknown	Unknown
Fort Gordon	DACA21-02-C-0023	This project is the Ft Gordon Communications Facility project. The building will house the telephone switch and data network components. Problem: The building construction is complete; it should have been a turn-key project. However, there are **no comm**	The Corps of Engineers had to request permission to spend additional money ($2.5M+), Corps coordinated with the switch PM (DCASS PM) to develop a SOW and select a contractor to complete the work identified in Tab F, and DCASS PM had to get authorization t	**Cutover was originally planned for June 04. Cutover now will be at least Jan 05**	Additional cost is unknown; however, PM DCASS (switch PM) will be adversely impacted due to delays associated with the switch installation. The switch contract was awarded in Mar 04.
Fort Gordon	Various	Various projects. The TAB F is not always completed and/or approved by DOIM. This causes problems providing facilities or requirements that are requested after the project has been funded. When the DOIM completes Tab F, it is sometimes modified. This	Only DOIM should have write access for Tab F.	Unknown	Unknown
Fort Gordon	All	DOIM does not receive electronic and hard AS-BUILT Drawing set. DPWL does not have electronic copies or hard copies of new telecommunication maintenance holes which were installed under a Corp of Engineers projects.	Add DOIM to distribution list for drawings.	Unknown	Unknown
Fort Gordon	All	Corps Engineers do not always have contractors or sub-contractor that understands ANIS/TIA/EIA standards when installing telecommunications.	Mod to the contracts cost the government more.	Unknown	Unknown

Recommendations:

- **ASC:**
  - **Add this, as an ongoing action, to the agenda of future ASC meetings**
- **NETCOM/9th ASC:**
  - **Solicit data from the remaining RCIOs, and updated data from those that have responded**
  - **Obtain information on the total number of MCA projects at the affected installations and the IS costs for each**
  - **Present updated information at future ASC meetings**